

# An Overview of Subsistence Research in Region III

An Oral Report to the Board of Game  
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RC 4 Tab 1.2

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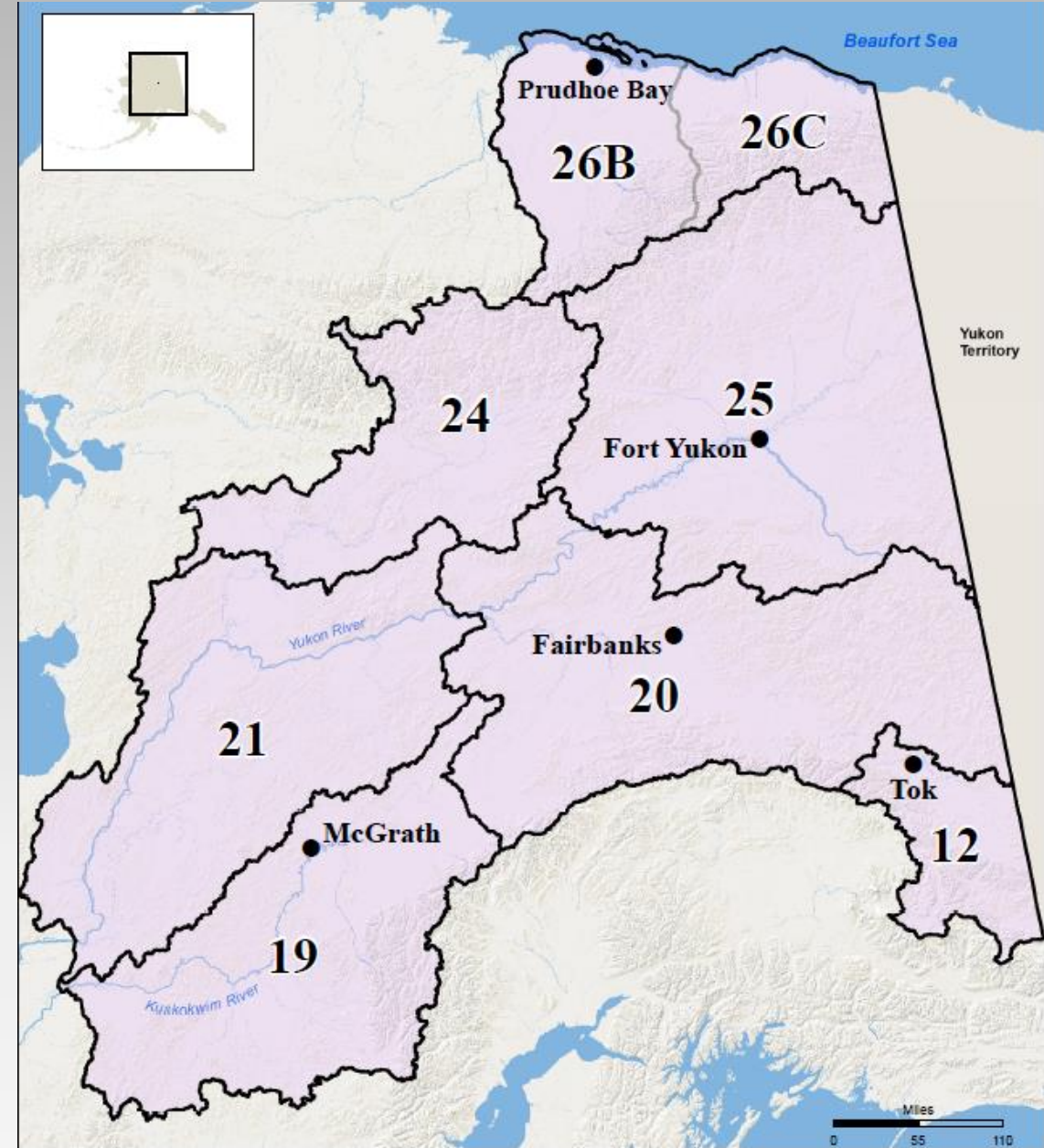
# Overview

- Introduction to Region III
- Overview of Subsistence Research: Harvest composition by representative study communities
- A closer look at Subsistence patterns and ongoing research



# Introduction to Region III

- 7 Game Management Unit: 12, 19, 20, 21, 24, 25 and 26(B&C)
- Geographic area covers the eastern North Slope, the Yukon River drainage, and extends through the middle Kuskokwim River
- Encompasses 71 communities, including the hub communities of Fairbanks, Fort Yukon, and Galena





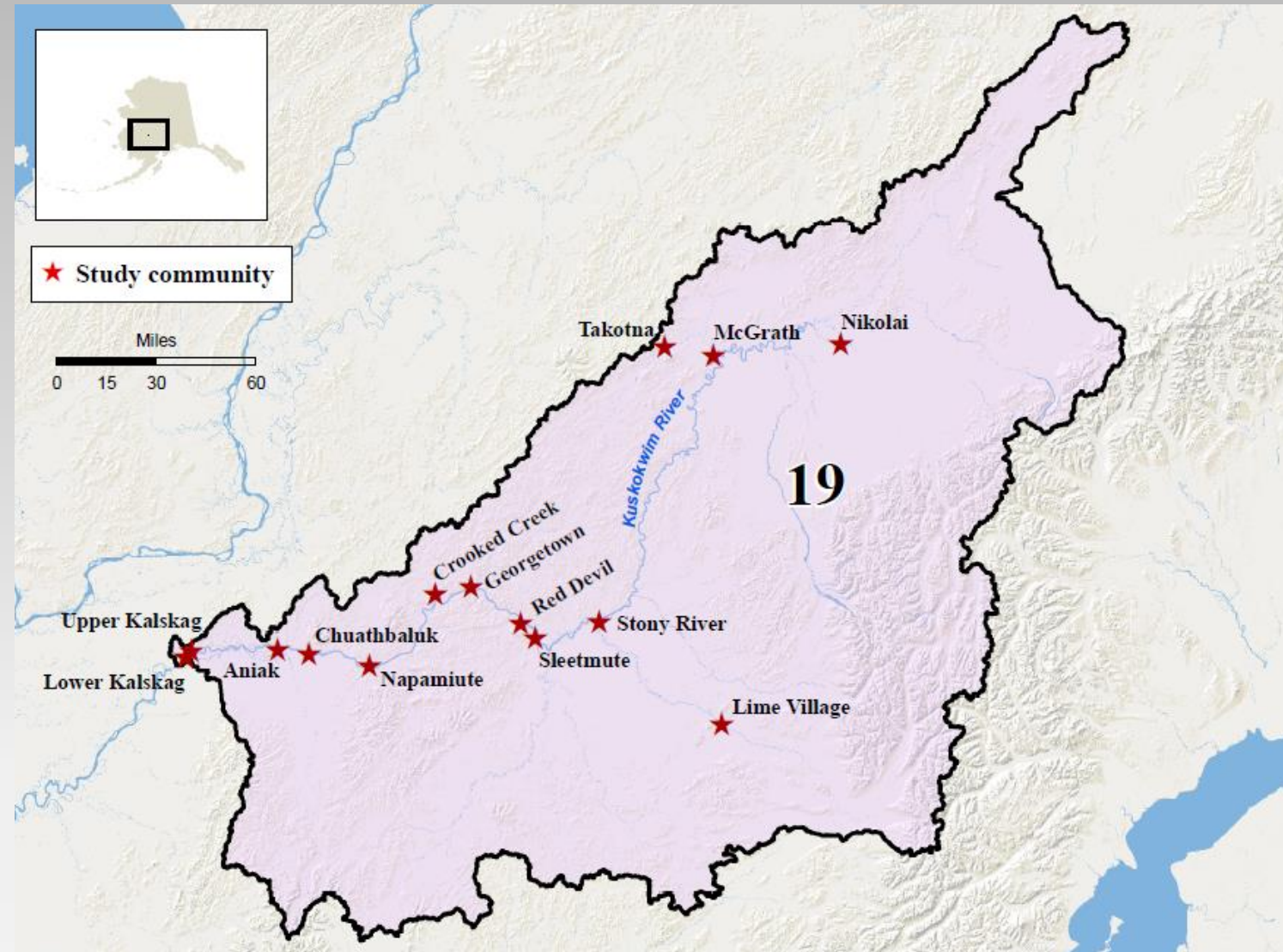
# Subsistence Research Effort



- Community baseline studies (focus on one year)
  - Harvest and use
  - Mapping
  - Demographics, income, food security
- Targeted Research
- Local and Traditional Knowledge
- Subsistence: more than just harvest

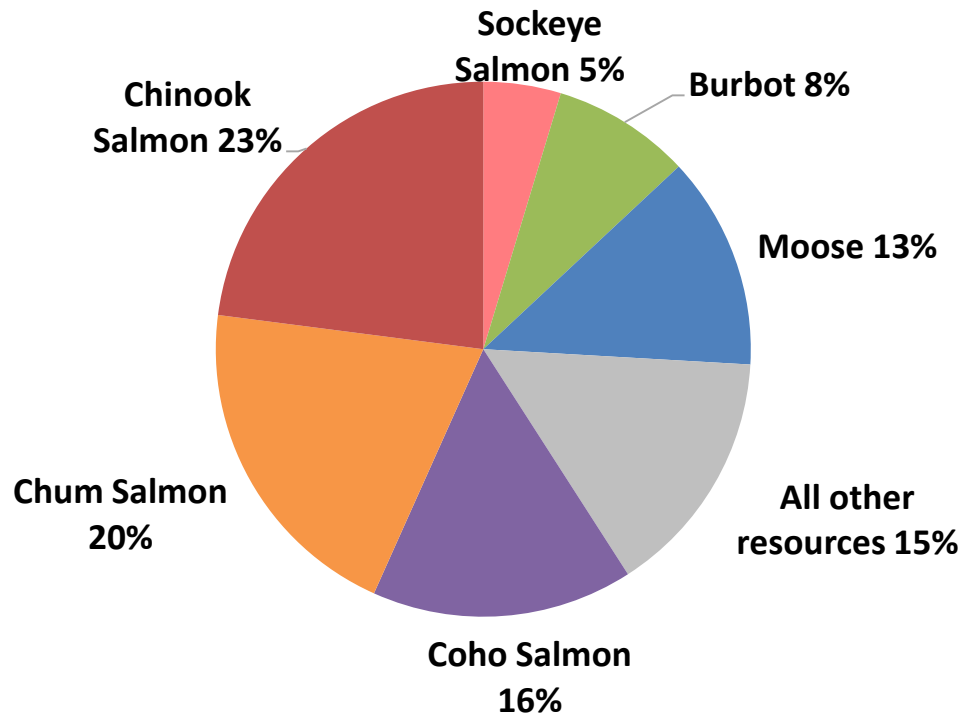
# Unit 19

- **14** communities
- Estimated population in 2018: **1,829** people
- Harvest survey data (comprehensive) collected in **13** communities from 2009-2011

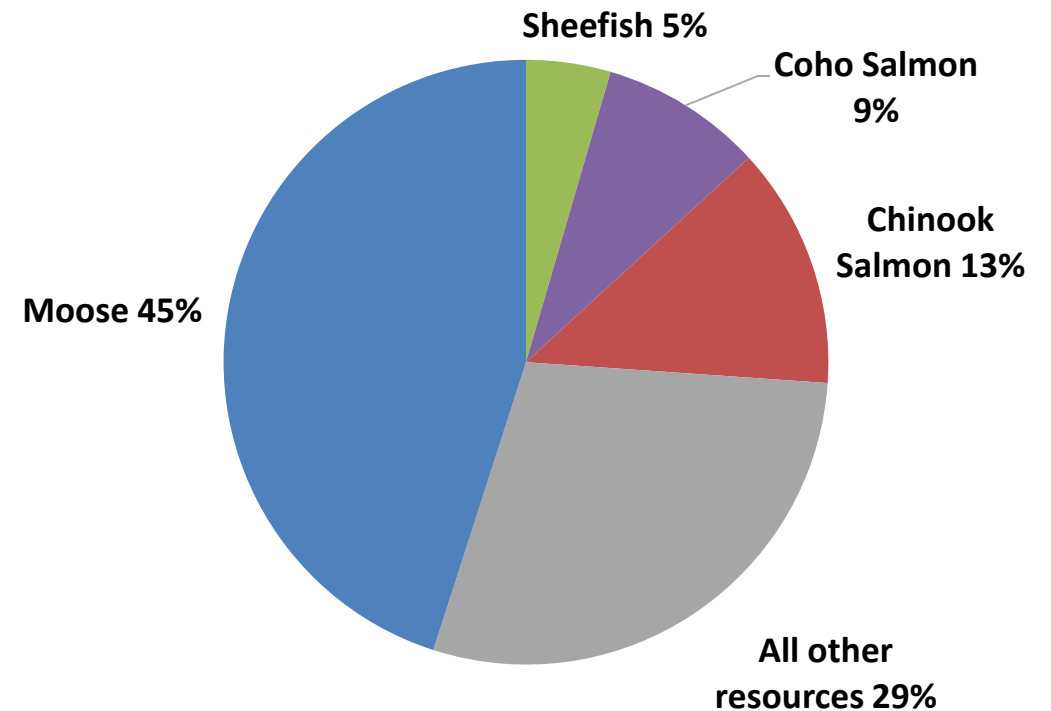


# Harvest Composition Unit 19

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Aniak, 2009

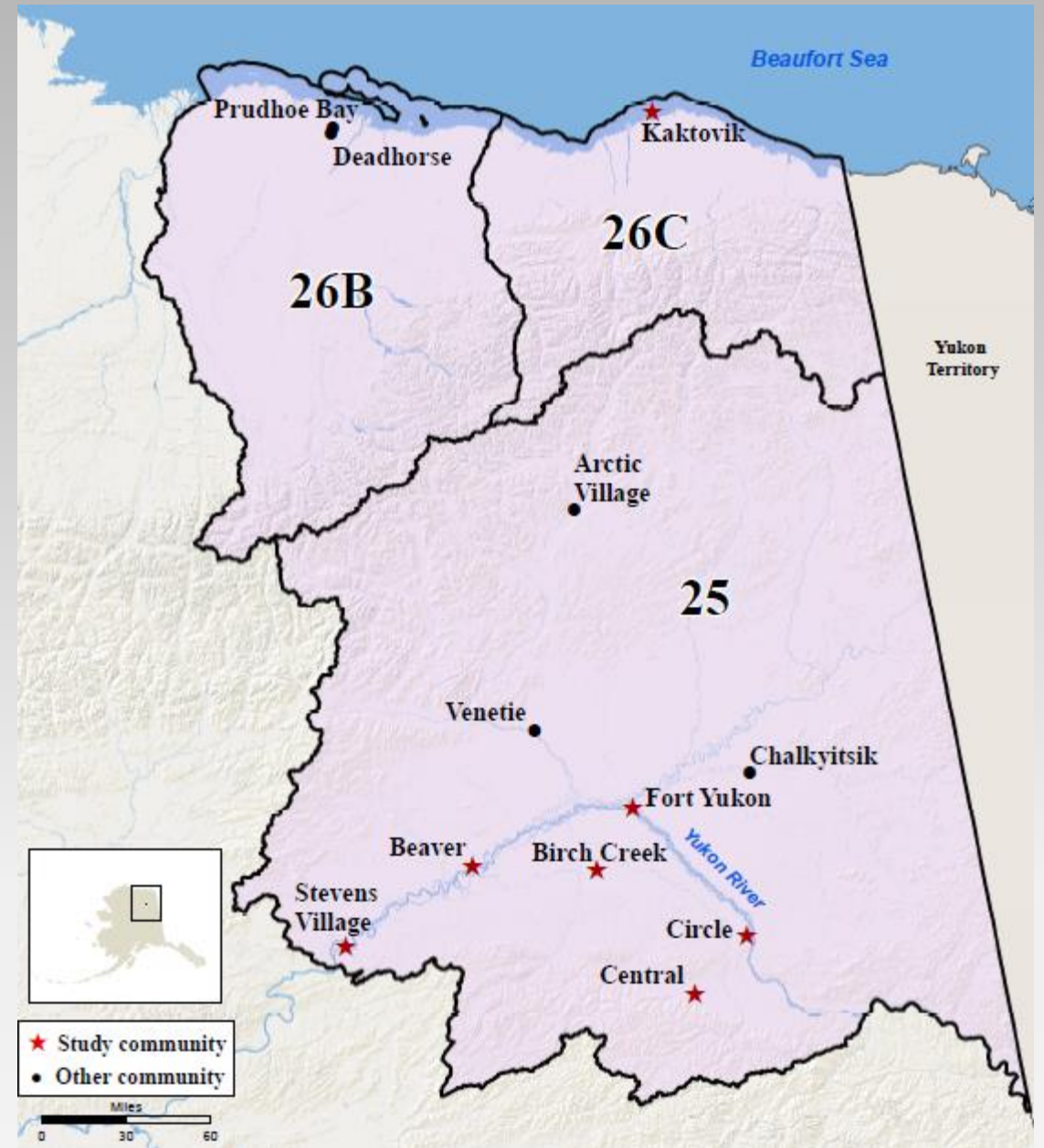


McGrath, 2011



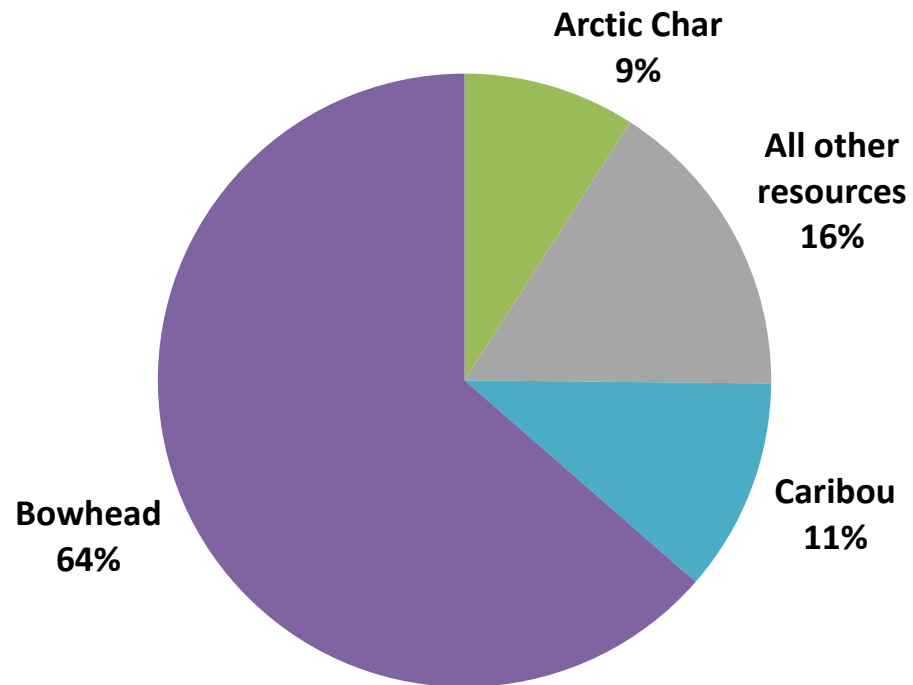
# Unit 25 and 26 (B)(C)

- Unit 25: **9** communities;  
Estimated population in 2018:  
**3,699** people
- Unit 26 (B)(C): **2** communities;  
estimated population: 2,420
- Harvest survey data  
(comprehensive) collected in **7**  
community from 1992-2018

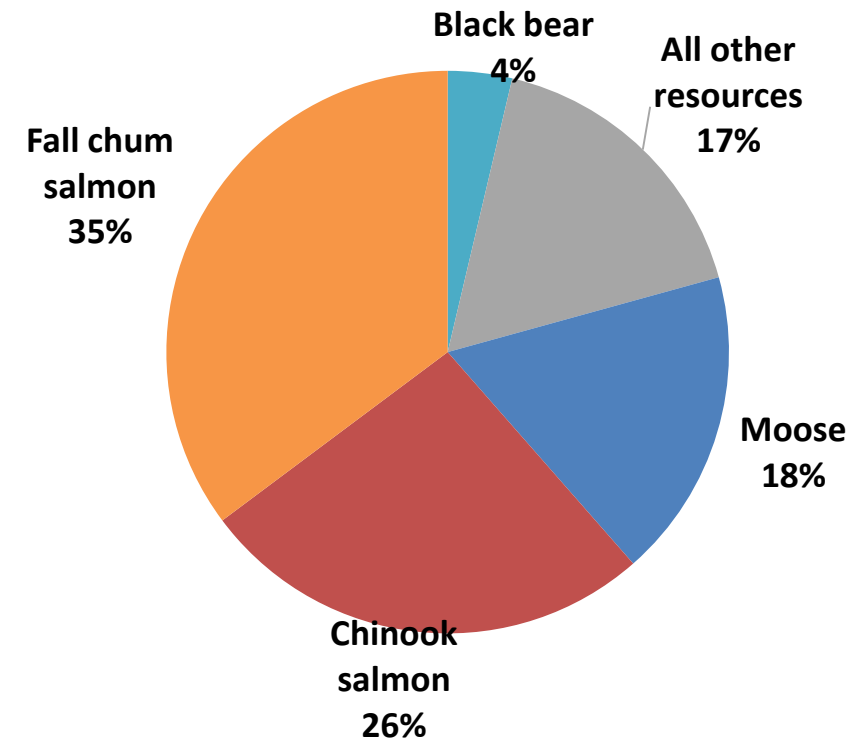


# Harvest Composition Unit 25 and 26 (B)(C)

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Kaktovik, 1992

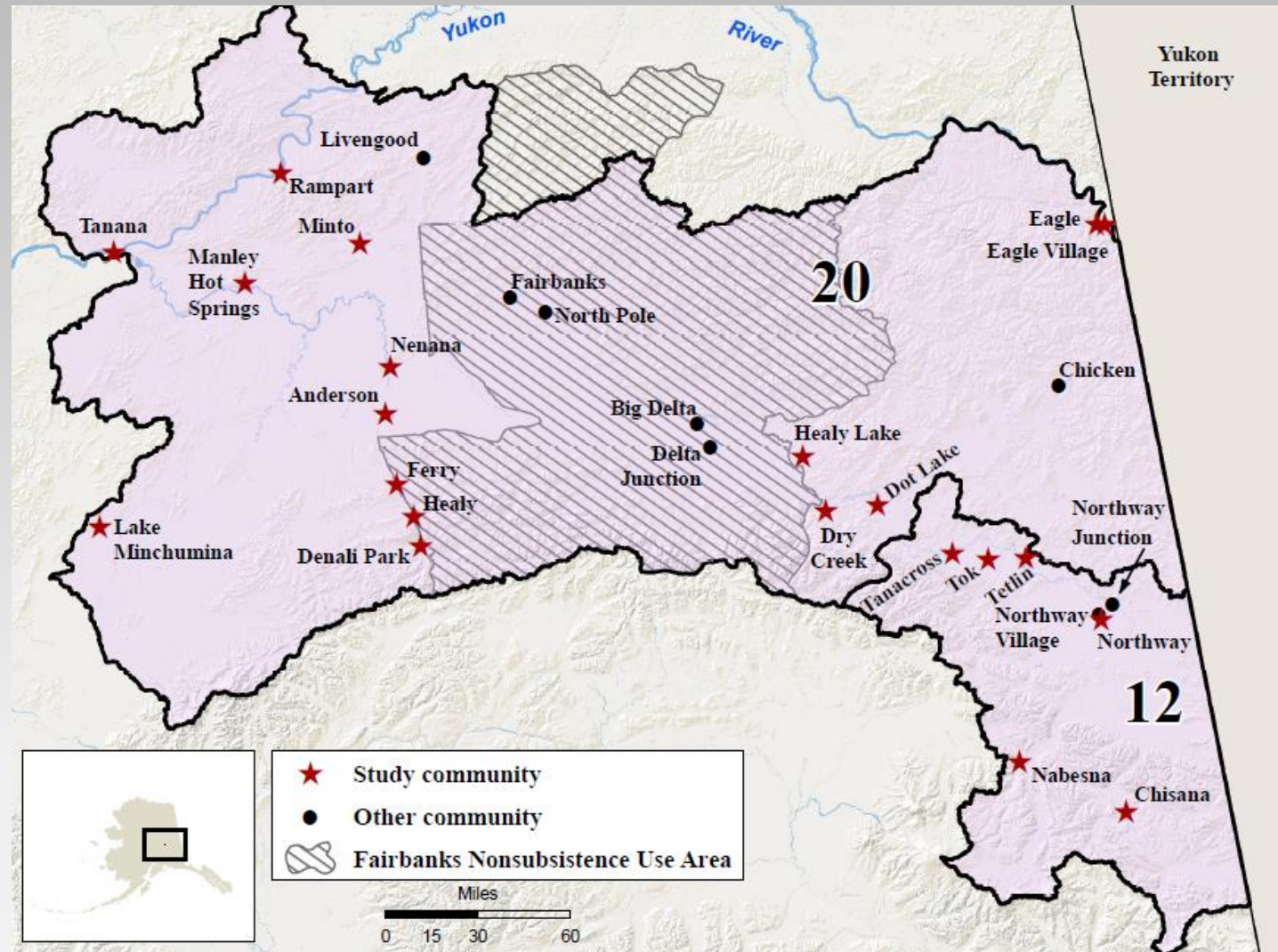


Fort Yukon, 2017



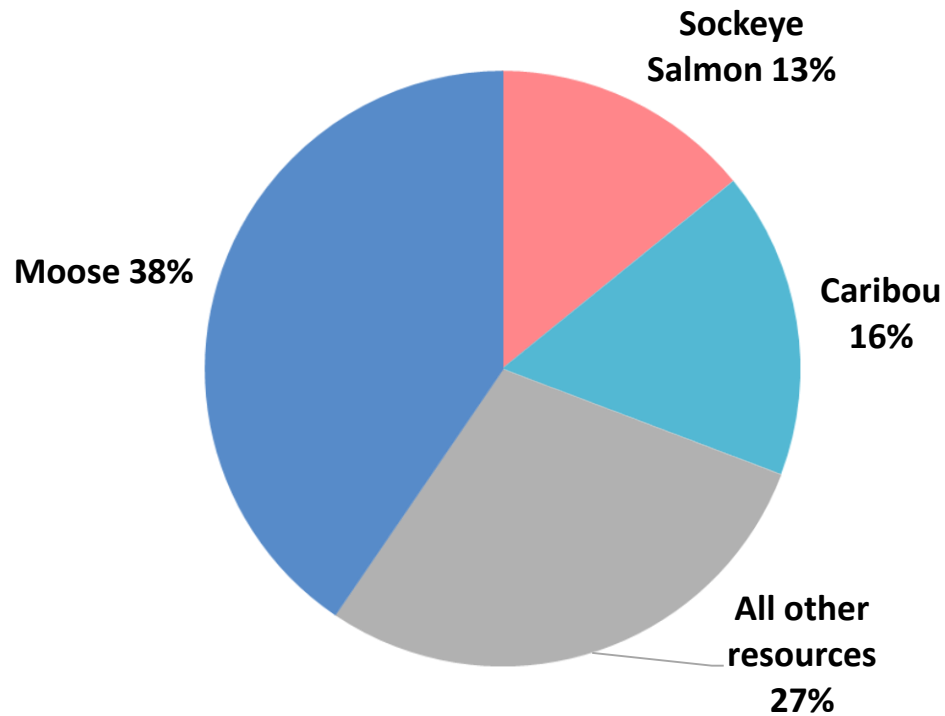
# Units 12, 20

- Unit 12: 6 communities; 2018 estimated population – **1,613** people
- Unit 20: **20** communities; 2018 estimated population – 101,607 people
- Harvest survey data (comprehensive) collected in **15** of the communities outside of the FNSA

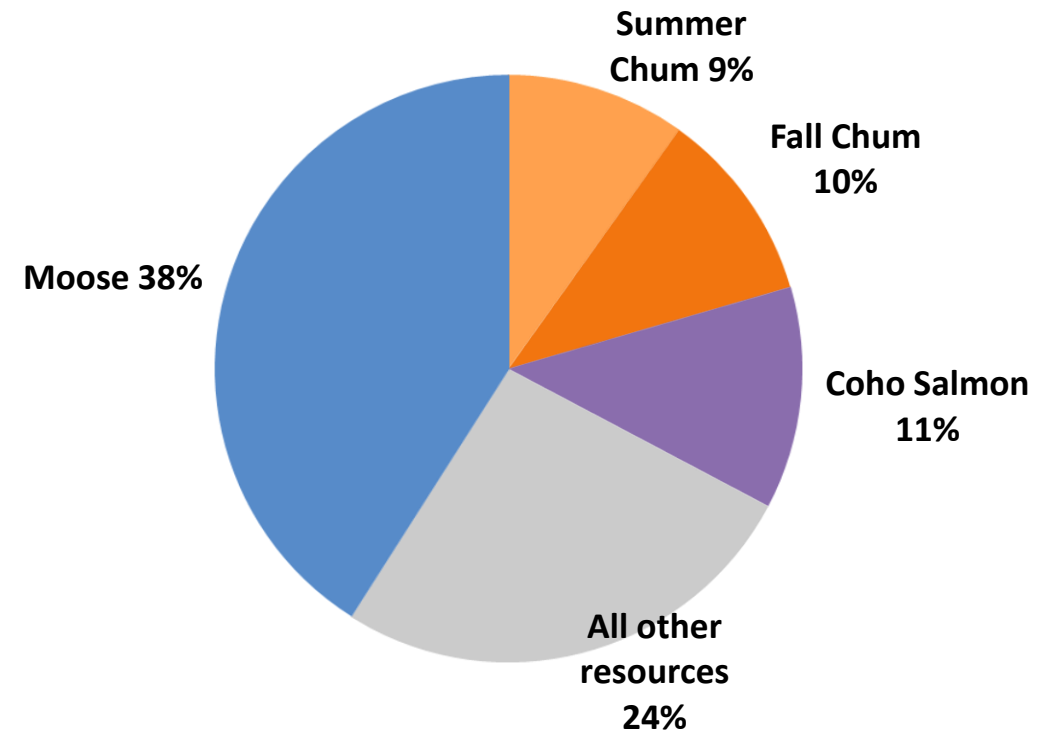


# Harvest Composition Unit 12 and Unit 20

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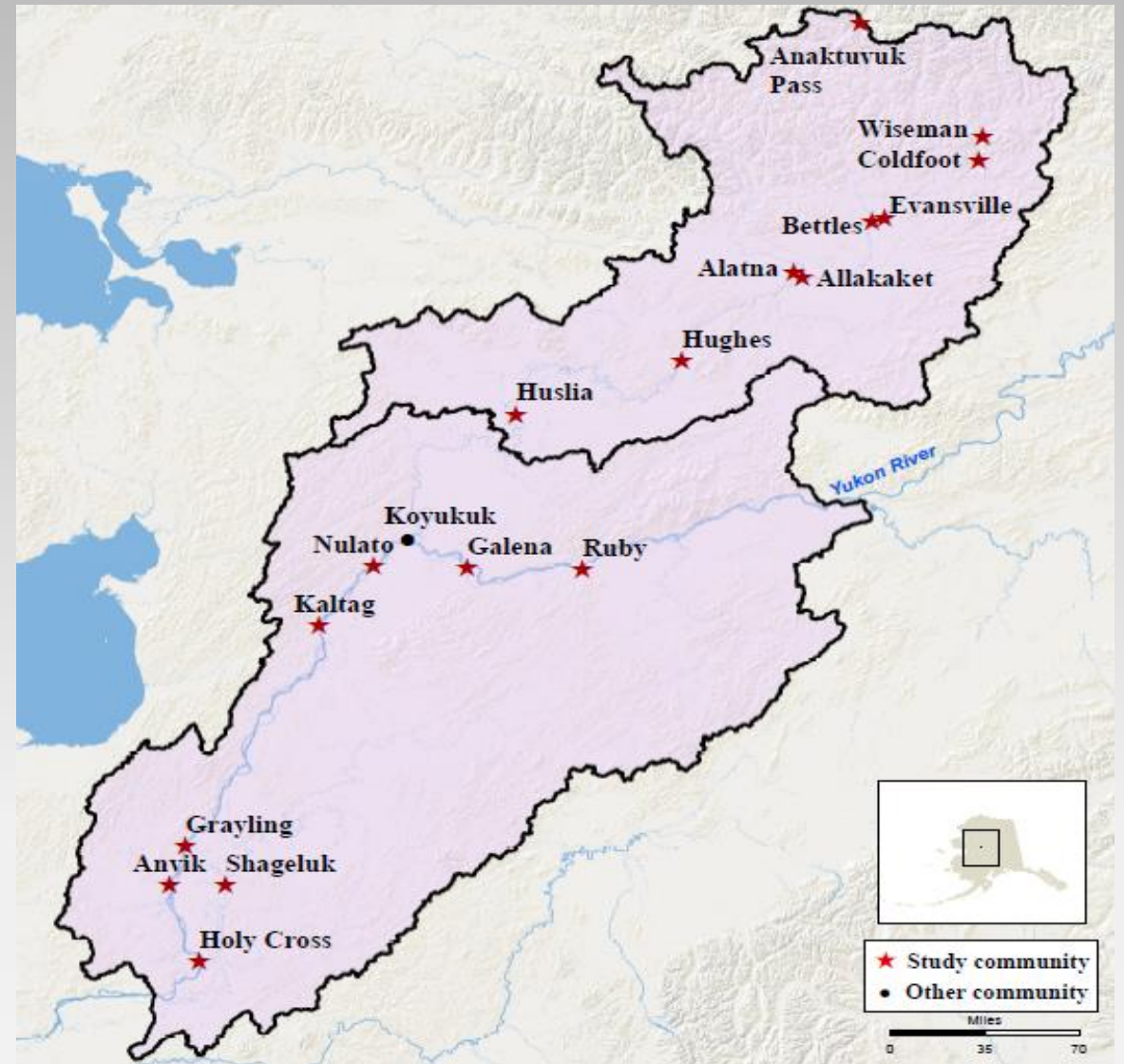
Tok, 2011



Minto, 2011

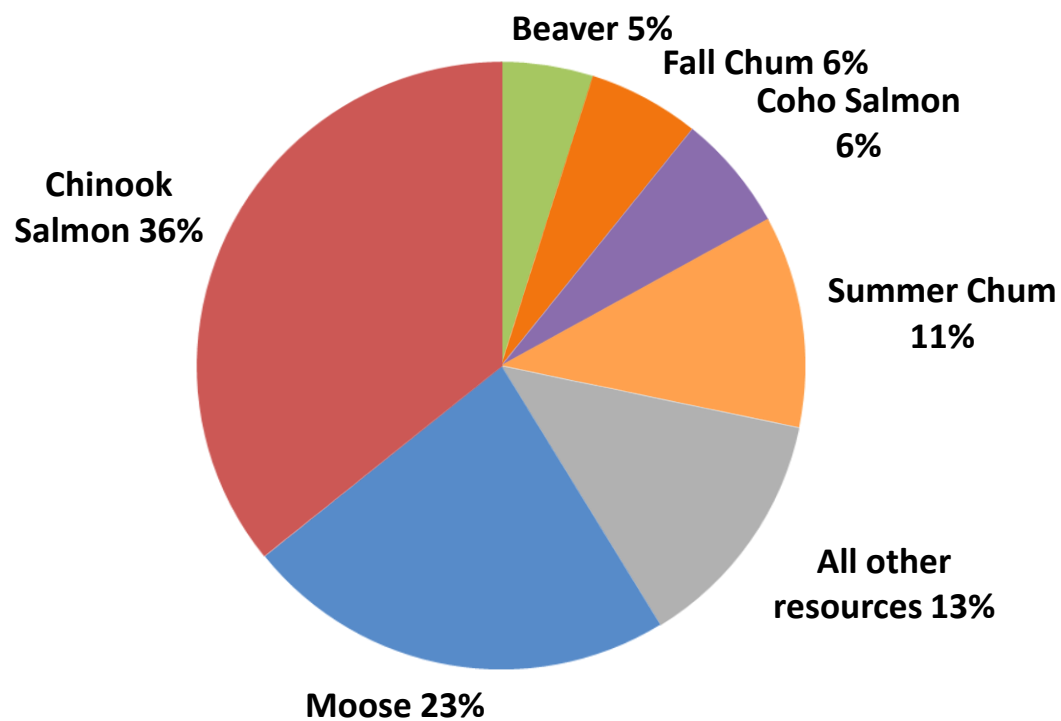
# Units 21 and 24

- Unit 21: **9** communities; 2018 estimated population – 1,626 people
- Unit 24: **9** communities; 2018 estimated population – 1,017 people
- Harvest survey data (comprehensive) collected in **16** community from 1984-2018

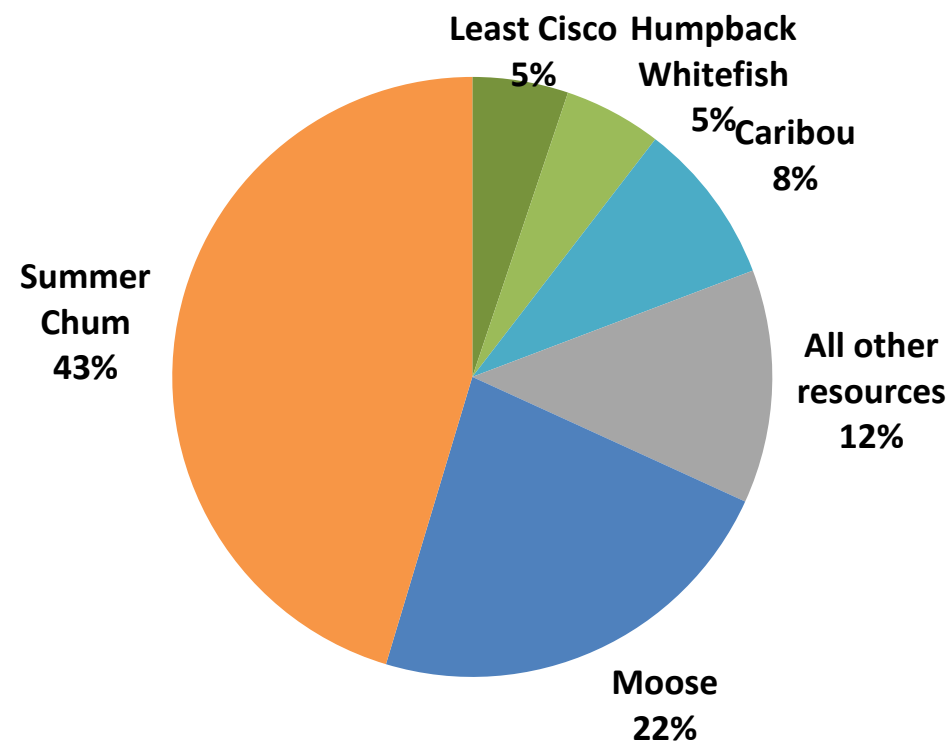


# Harvest Composition Unit 21 and 24

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Anvik, 2011



Hughes, 2014

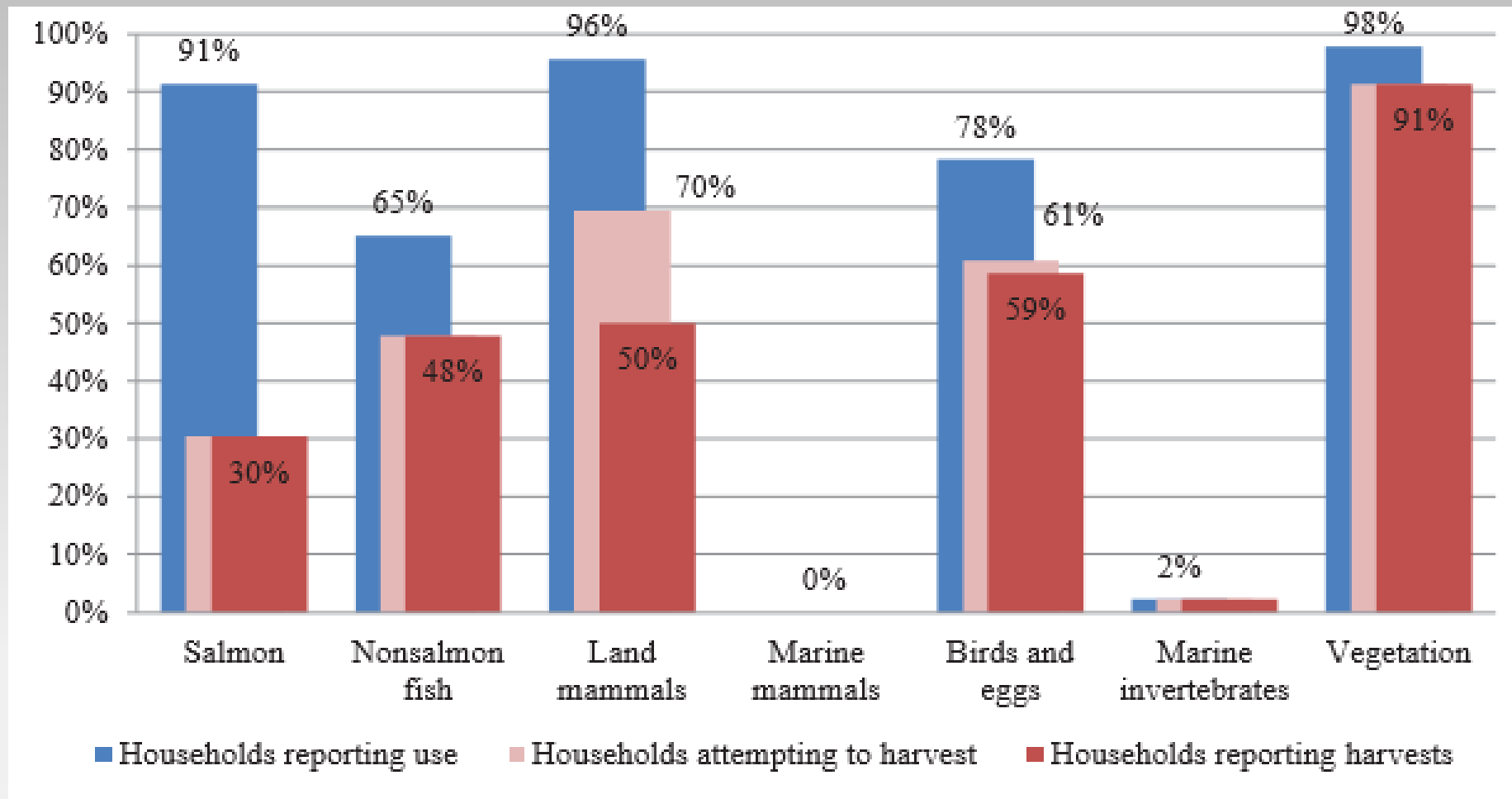


# Subsistence: Not just harvest

- Mixed cash, subsistence economies
- Sharing and other forms of distribution
- Community Survival

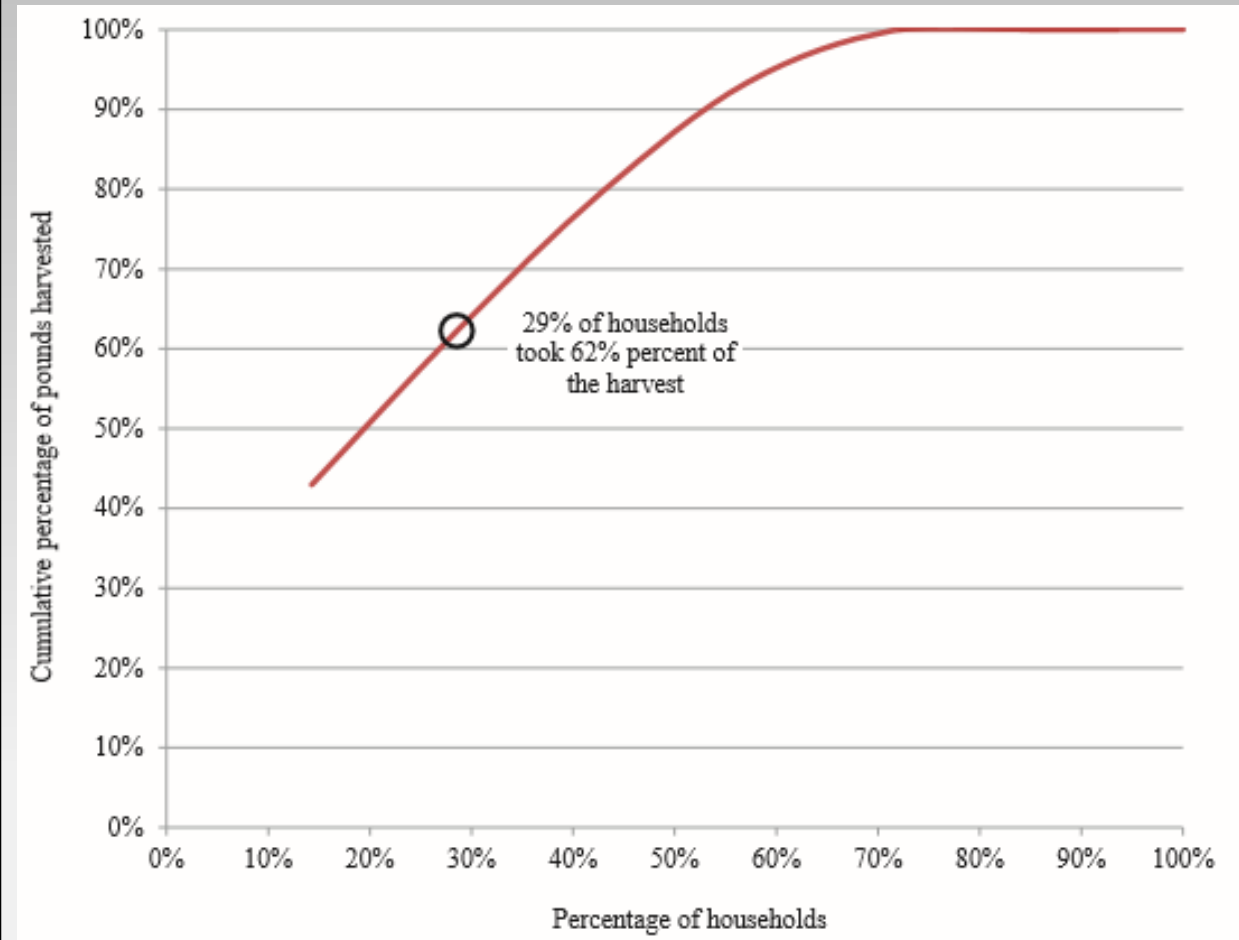


# Harvest and Use rates

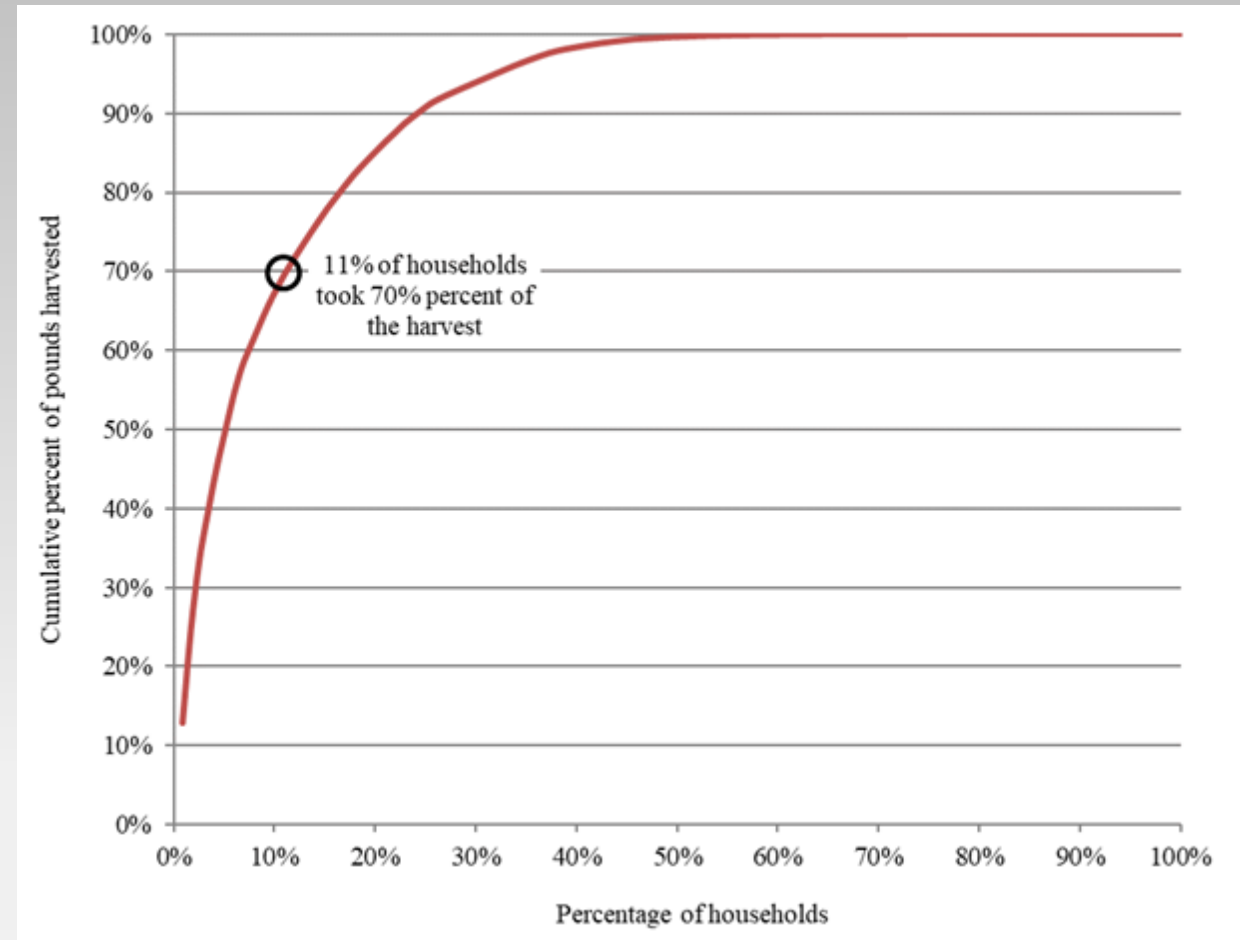


**Minto, 2012**

# Concentration of Harvest



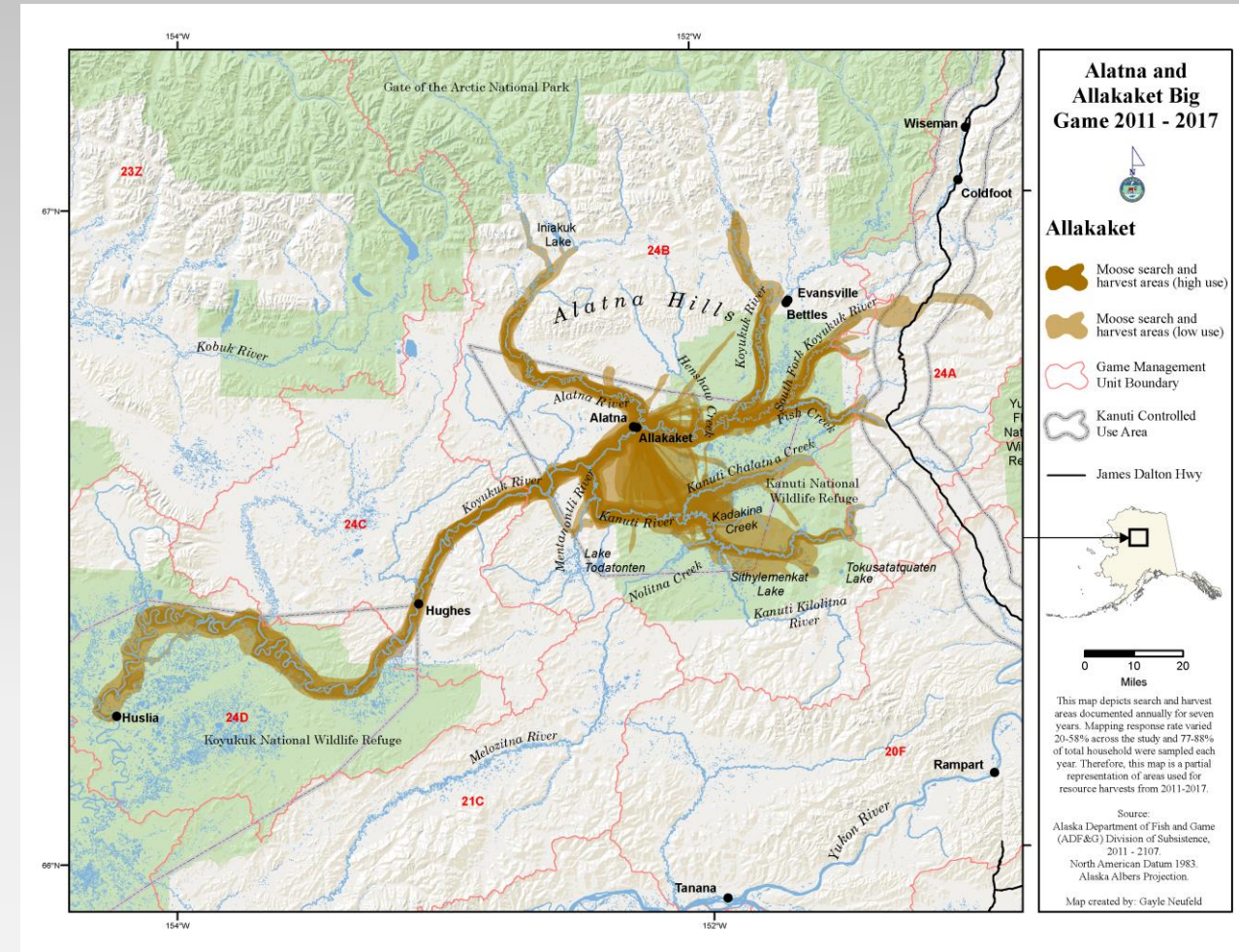
Rampart, 2014



Fort Yukon, 2017

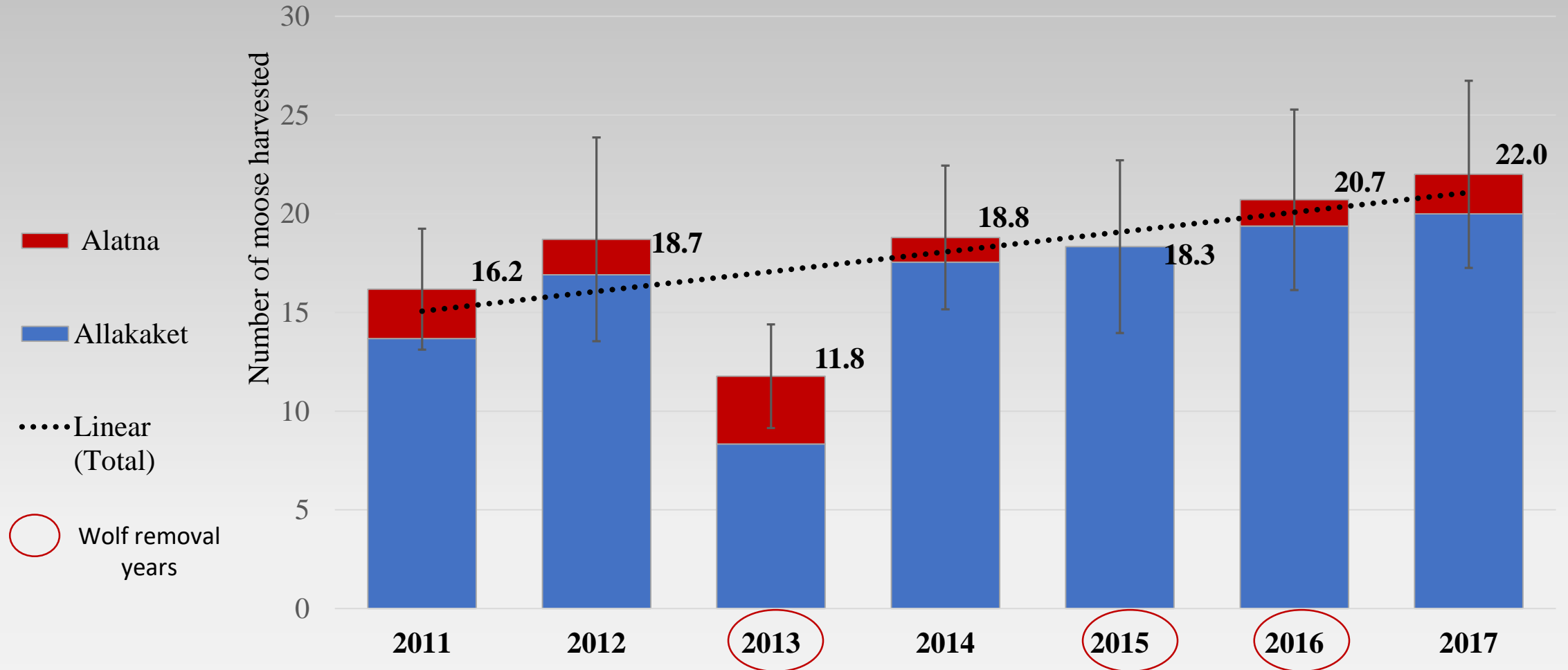
# Moose and Big Game Harvest Assessments - Allakaket and Alatna (2011-2017)

- Collaborative research with DWC - in consultation with local village councils
- Background on wolf removal program
- Research Objectives
  1. Characterize subsistence hunting
  2. Explore if/how harvest and hunter effort respond to Intensive Management
- Research Methods
  - Household survey and mapping
  - Ethnographic interviews
  - Biological assessments (DWC)





# 2011-2017 Moose Harvest Estimates by Community



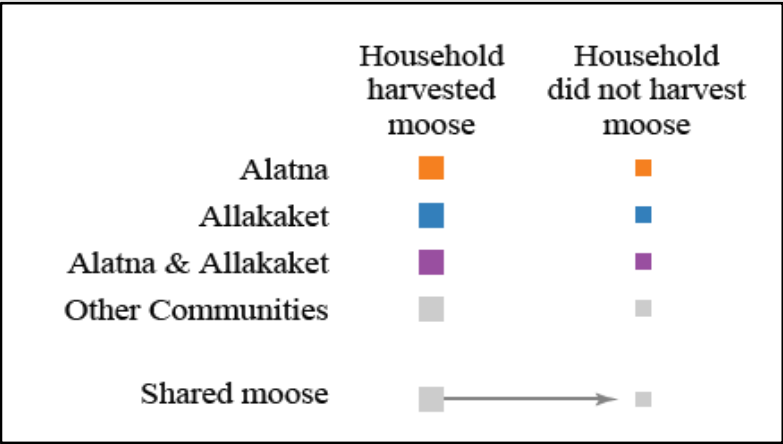
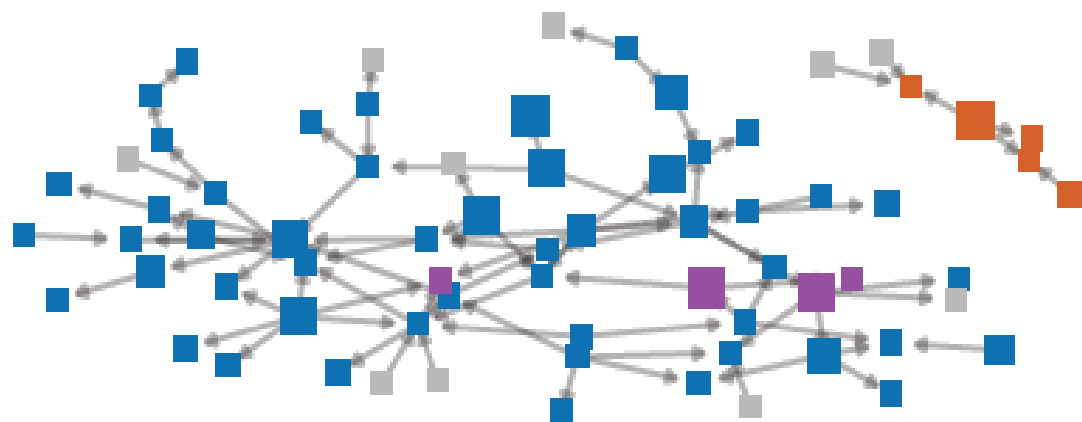
# Measuring Hunting Effort in Allakaket and Alatna

- **Catch Per Unit Effort (CPUE)**
- **Metrics to measure CPUE**
  - Estimated number of trips
  - Number of days out hunting
  - Number of hours per day spent hunting
  - Estimated distance traveled in search of moose
  - Total spent on fuel for hunting
  - How many moose were harvested
- **Example from Preliminary results**
- **Challenges**



# Connected through Moose

Shared 2014





We would like to thank the communities of Region III and the Division of Wildlife Conservation for their cooperative efforts in continuing research.

Questions?





# Back Pocket Slides

# Sample

	Allakaket						
	2011	2012	2013	2014	2015	2016	2017
Final estimate of permanent households	57.0	62.0	56.0	62.0	55.0	62.0	64.0
Percentage of total households surveyed	87.7%	71.0%	83.9%	85.5%	76.4%	77.4%	75.0%
	Alatna						
	2011	2012	2013	2014	2015	2016	2017
Final estimate of permanent households	10.0	9.0	8.0	5.0	4.0	4.0	7.0
Percentage of total households surveyed	80.0%	55.6%	87.5%	80.0%	50.0%	75.0%	100.0%

# CPUE Allakaket and Alatna, combined

<b>Year</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<b>Estimated number of Trips</b>	188	261	222	302	142	282	305
<b>Collective Miles traveled</b>	10,517.5	16,559.6	13,852	17,874.5	4,394.5	14,787.5	27,429.2
<b>Miles Traveled per moose</b>	649	885.5	1,173.9	950.8	240.1	714.4	1,246.8
<b>Collective fuel cost</b>	\$17,972	\$29,057	\$22,886	\$36,934	\$23,910	\$36,449	\$46,902
<b>Fuel cost per moose</b>	\$1,109	\$1,534	\$1,940	\$1,965	\$1,307	\$1,761	\$2,132

# Hunting Success

Table n–m. Household and hunter success in moose hunting, Allakaket and Alatna 2011-2017.

Study year	Estimated harvest	Hunting households			Hunters				
		Total	Successful households		Total	Harvesting		Part of successful group	
			Number	Percentage		Number	Percentage	Number	Percentage
2011	16.2	37.0	15.0	40.6%	59.1	16.2	27.4%	32.7	55.3%
2012	18.7	50.9	17.3	34.0%	82.3	18.7	22.7%	48.1	58.4%
2013	11.8	36.7	11.8	32.0%	68.4	11.8	17.2%	31.7	46.3%
2014	18.8	47.0	16.5	35.0%	76.4	18.8	24.6%	35.3	46.2%
2015	18.3	30.1	13.1	43.5%	49.8	17.0	34.2%	34.0	68.4%
2016	20.7	46.6	20.7	44.5%	69.9	19.4	27.8%	44.0	62.9%
2017	22.0	45.3	18.0	39.7%	82.3	22.0	26.7%	50.7	61.5%

*Source* ADF&G Division of Subsistence household surveys, 2011–2017.

*Note* In this table, successful hunters and successful households refer to instances where the moose was shot by a member of a household in either Allakaket or Alatna.